

## Yih-Ho Michael Pao, Dr. Eng.

*Member, National Academy of Engineering USA  
Chairman, ecoPower Partners LP and Floating Windfarms LLC*



Dr. Pao, a Chinese American, was elected a Member of National Academy of Engineering USA, in 2000; for his research, development, and commercialization of ultrahigh-pressure waterjet into industrial tools for waterjet machining, tunnel boring, and surface preparation. His windpower company has developed and commercialized the vertical axis wind turbines, jointly with the Sandia National Labs; and won the top national award for energy innovation for 1984, from the US Dept of Energy, jointly with Sandia. He has formed six technology-based companies in the US, served as their CEOs, and led the efforts that developed and commercialized four new technologies into better industrial tools. And, in the process, created 3 new industries: waterjet machining industry; trenchless industry; and waterjet surface preparation industry. He was cited by the French Journal 'Industries Techniques' in 1998 as one of the World's 100 important innovators for the past 40 years.

He has taken three of his companies public, and listed them on NASDAQ National Market (see Exhibit-1). One of the companies, Flow International (NASDAQ: FLOW), was the 3<sup>rd</sup> best performing IPO for 1983, according to the Barron's.

**Developed Better Industrial Tools and Created 3 New Industries.** Over the past 30 years, Dr. Pao formed six technology-based companies in the U.S. (see Exhibit-1), served as their CEOs, and led the efforts that developed and commercialized four new technologies into better industrial tools. And, in the process, created three new industries – *waterjet machining industry*; *trenchless industry*; and *waterjet surface treatment industry*:

1. **[Waterjet Technology](#)** – developed the ultrahigh-pressure waterjets and abrasive-waterjets into better tools for industrial cutting, drilling, and milling, especially for the flexible factory automation. And, created the new [waterjet machining industry](#) and [waterjet surface treatment industry](#) (see [www.floatingwindfarms.com](http://www.floatingwindfarms.com) for a Waterjet video, which was broadcasted nationwide by the FOX Cable News Channel in its Champions of Industry Program, on July 20, 2001)
2. **[Horizontal Directional Drilling Technology](#)** – developed the guided, high-pressure, rotating mud-jets into a better tool for horizontal directional drilling in soft soils, especially for the trenchless installation of underground cables and pipes at low costs and with minimal surface disruption. It ushered in the modern [trenchless industry](#) (see [www.floatingwindfarms.com](http://www.floatingwindfarms.com) for an illustrative video on the horizontal directional drilling, using guided rotating waterjets)
3. **[Vertical Axis Wind Turbine Technology](#)** – developed and commercialized, jointly with Sandia National Lab, the vertical axis wind turbines as low-cost, durable tools for converting wind over land to 'green' electricity.
4. **[Advanced Wet-Blasting Technology](#)** – developed the advanced wet-blasting into an effective tool for removing rust and old coating from steel surfaces to bare metal, without airborne dust or hot sparks – replacing the hazardous grid blasting.

**A Windpower Pioneer.** Dr. Pao was an early pioneer in developing large wind turbines. He is the founder of FloWind Corporation in California, and served as its CEO from 1981 to 1986. He led the efforts at FloWind that developed the 100 kW and 300 kW vertical axis wind turbines (VAWTs), jointly with the Sandia National Lab. The 300 kW VAWT was the largest and most cost-effective wind turbine at that time. For their contributions, FloWind and Sandia jointly received the [top national award for energy innovation](#) for 1984, from the U. S. Dept of Energy.

He was also an early pioneer in developing large-scale windfarms in California. He led the efforts at FloWind that designed, manufactured, installed, and operated 500 of these VAWTs over 7,000 acres of high-wind properties in two windfarms in California – one in the Altamont Pass near San Francisco and one in the Tehachapi Pass near Los Angeles, for a total power output of [170 MW](#) (including those from Danish wind turbines). By the end of 1985, FloWind became the 2<sup>nd</sup> largest windpower company in the world. These low-cost VAWTs operated cost-effectively in California for over 20 years. (See [www.floatingwindfarms.com](http://www.floatingwindfarms.com) for a FloWind video)

**Floating Windfarms at Sea.** Dr. Pao has come out of retirement to lead the efforts at Floating Windfarms LLC – to develop the Floating Windfarm into a *cost-effective* and *user-friendly* tool for converting the rich wind energy resources at sea into 'green' electricity at low costs, to be much lower than the costs of coal electricity.

Such that, Combined with the development of cost-effective energy storage facilities, wind at sea can replace fossil fuels as the principal source of energy for electricity generation; and the low-cost 'green' electricity from wind at sea can replace gasoline as the principal source of energy for the plug-in hybrid vehicles. Cost-effective floating windfarms at sea and energy storage facilities, when fully developed and implemented, will enable electricity from wind at sea to replace fossil fuels as the world's principal source of energy, and greatly reduce the global energy, air pollution, and climate change problems!

Exhibit-1. Dr. Pao has formed six technology-based companies in the US; served as their CEOs; taken three of them public; and listed them on NASDAQ National Market. Flow International went public in 1983, and was the 3<sup>rd</sup> best performing IPO for that year, according to the Barron's

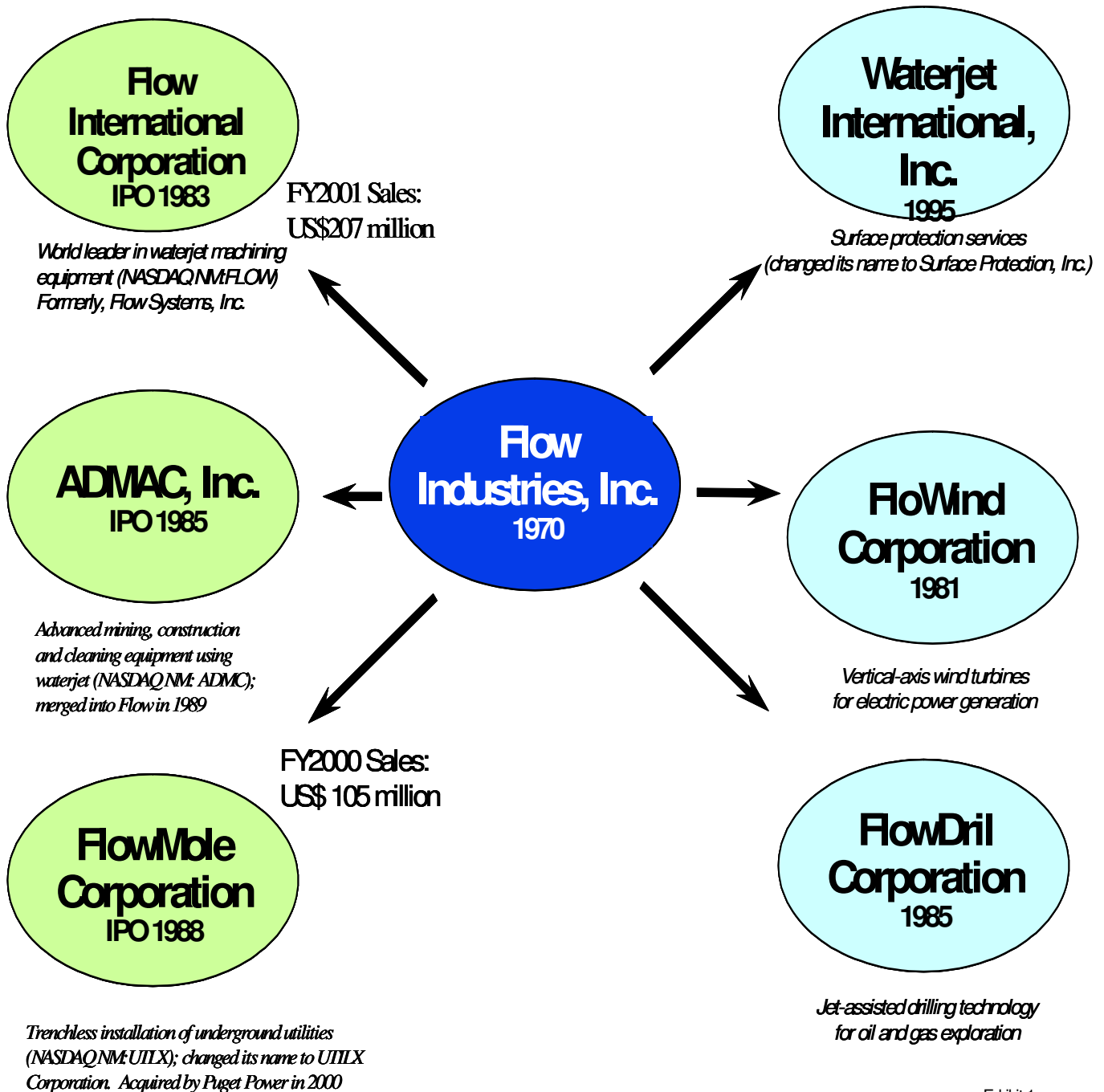


Exhibit 1